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BUREAU OF SHIPS

TECHNICAL INSPECTION REPORT

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By Authority of JOINT CHIEFS OF STAFF JCS 1795/36 DATED 15 APRIL 1949
By John H. Degette Date 3 SEP 1953

BEACHED LANDING CRAFT

TESTABLE

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⑥ OPERATION CROSSROADS

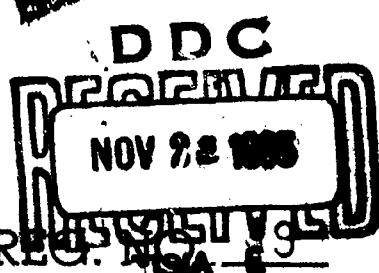
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⑪ 1947 ⑫ 30P.

⑯ XRD-82



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BUREAU OF SHIPS GROUP
TECHNICAL INSPECTION REPORT

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Captain, U.S.N.

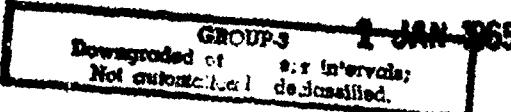
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TECHNICAL INSPECTION REPORT

OVERALL SUMMARY

I. The following landing craft were beached on Bikini Island during test A:

LST 133
LCI 615, 620
LCT 414, 812, 1175, 1237
LCM 2, 3, 4, 5, 6.
LCVP 7, 8, 9, 10, 11, 12

The larger craft (LST's, LCI's and LCT's) were beached approximately midway between the limits of high and low tide and were secured with bow lines to objects on the beach and with stern anchors. The smaller craft (LSM's and LCVP's) were pulled up on the beach just above the high water mark by tractors to prevent their displacement by tidal or wave action.

2. The following landing craft were unaffected as a direct result of test A:

LST 133
LCI 620
LCI 812, 1175
LCM 2, 3, 4, 5, 6
LCVP 7, 8, 9, 10, 11, 12

3. The damaged landing craft fall into three general catagories as follows:

(a) Craft exhibiting minor effects of air blast:

LCI 615
LCI 414, 1237

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(b) Craft damaged and flooded as a result of contact with coral ledges during the unattended period following the test:

LCI 615
LCT 812, 1175

(c) Craft damaged by jarring, abrasion, or rupture as a result of handling on the beach by tractors:

LCM 6
LCVP 9, 10, 11

4. Blast pressure was slight, caused no structural damage, and was limited to such effects as tearing of canvas and blowing of soot out of a galley range. No heat or shock effects resulted from the test. No machinery was damaged except by corrosion incident to flooding of engine spaces.

There was no impairment of watertight integrity as a direct result of the test. However, several craft which were not drawn up on the beach above the high water mark were punctured by continued pounding against coral ledges. Damage from contact with coral was cumulative over an unattended period of twelve days between the time of the test and the date of inspection. A general condition of leaky propeller shaft stuffing glands contributed to flooding of engine spaces.

In view of the disadvantageous beaching conditions on Bikini, it is considered that the landing craft withstood the unattended period very well. As far as the direct results of test A are concerned, damage to the craft beached on Bikini is essentially nonexistent. Fighting efficiency was not affected and ability of the craft to engage in beaching operations is unimpaired.

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DETAILED DESCRIPTION OF DAMAGE

1. The condition of each craft on the day of inspection is as follows:

(a) LST 133.

No damage. (Photograph 1956-9, page 12).

(b) LCI 615.

Soot was blown out of the galley range and the range lid was moved 6 to 8 inches as a result of blast pressure. No other effects attributable to test A are noted. Subsequent to the test, a fresh water tank was punctured due to rocking of the craft on a coral ledge. (Photograph 1957-7, page 13).

(c) LCI 620.

No damage. (Photograph 1956-7, page 14).

(d) LCT 414.

As a result of air blast, a canvas awning tore loose its pipe supports. The machinery space flooded completely through leaking stern tubes. This craft broached 90° from its original position. (Photograph 1957-1, page 15). When attempts were made to move the craft back to its original position, it was grounded solidly on a coral head.

(e) LCT 812.

At the time of inspection, this craft was striking heavily forward on coral ledges. The engine room flooded to within 2 feet of the overhead from a 10 inch split in the bottom plating. The ramp was down on the beach, probably left in this position for the test. The damage is considered to be the result of wave action during the unattended period. (Photograph 1958-3, page 16).

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(f) LCT 1175.

This craft was found down by the bow with the main deck awash forward and a slight starboard list. The engine spaces remained dry. Flooding forward apparently resulted from striking coral during the unattended period. (Photograph 1958-4, page 17).

(g) LCT 1237.

Blast pressure on canvas bent and tore loose an awning securing pipe aft of the bridge. The bottom leaked badly prior to the test. The engine room was flooded. The stern anchor cable parted and the craft broached 30°. (Photograph 1956-4, page 18).

(h) LCM 2.

No damage. (Photograph 2822-1, page 19).

(i) LCM 3.

No damage. (Photograph 2820-8, page 20).

(j) LCM 4.

The engine room flooded over the motor stringers, probably from leaking shaft packing glands. Compartments astern of the engine room flooded to a depth of 16 inches. No other effects were noted. (Photograph 2819-8, page 21).

(k) LCM 5.

The ramp securing cables were parted and the ramp was down. It is questionable whether this occurred during the test. The support for the port cable bow sheave is bent and the welded attachment of this support is broken. This damage appears to have occurred prior to test A. (Photograph 2818-2, page 22).

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(l) LCM 6.

No damage, except that the starboard skeg is pushed up against the propellor. This damage is believed to have resulted from towing the craft up the beach by tractor. (Photograph 1957-11, page 23).

(m) LCVP 7.

No apparent damage other than the effect of having been towed on the beach. (Photograph 2822-5, page 24).

(n) LCVP 8.

No apparent damage other than from tilting to starboard. (Photograph 2821-5, page 25).

(o) LCVP 9.

No damage. Floor boards, the battery, and some engine parts were missing. The engine cover was dislodged. (Photograph 2820-1, page 26).

(p) LCVP 10.

This is the worst damaged of the smaller landing craft, but all damage is believed to have occurred prior to the test, due to handling by tractor.

The craft rested on her starboard chine, supported by an earth ridge at her half-length. In the region of support, the starboard shell is torn away from its connection at the bilge chine. The third and fifth frames forward of the engine compartment are split throughout their length and the shell screws are pulled out of the first, second, fourth, and sixth frames forward of the engine space. Plywood on the transom is punctured and the rudder is bent. The side decking is cracked, port and starboard, just forward of the after deck. (Photographs 2819-1, page 1 and 2819-5, page 27).

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(q) LCVP 11.

No damage occurred to the sides or bottom. Two cells of the battery are broken (cause not known) and the engine cover and floor boards are dislodged. (Photograph 1957-12, page 29).

(r) LCVP 12.

No apparent damage. (Photograph 2816-8, page 30).

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SECTION IV

PHOTOGRAPHS

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BB-CR-219-502-14. Typical arrangement of beached craft.

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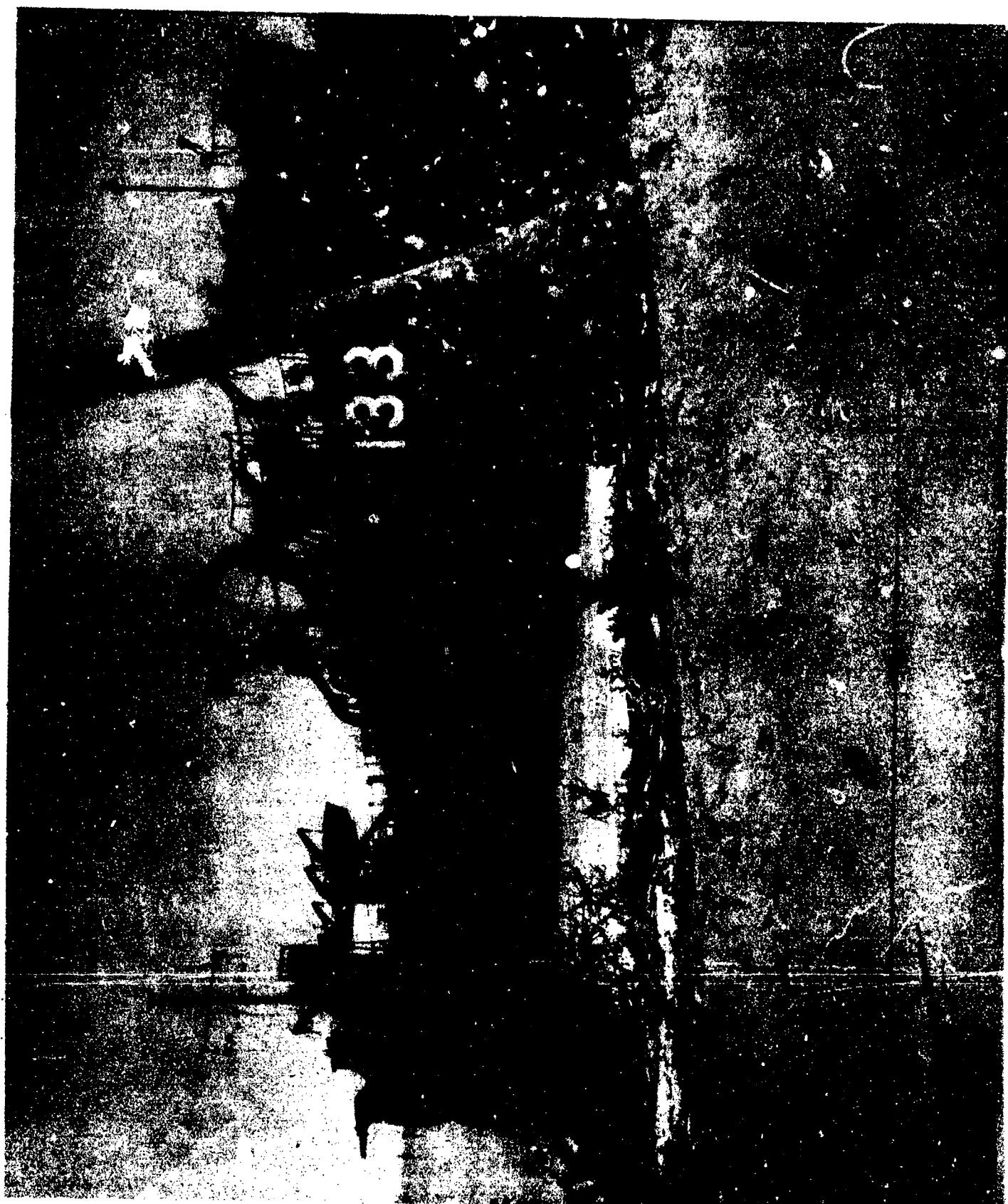
BB-CR-219-502-1 . Beached craft and submerged reefs. Note coral ledges on beach in left foreground.

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AA-CR-98-1956-9. LST-133 after Test A.

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AA-CR-98-1957-7. LCI-615 after Test A.

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AA-CR-98-1956-7. LCI-620 after Test A.

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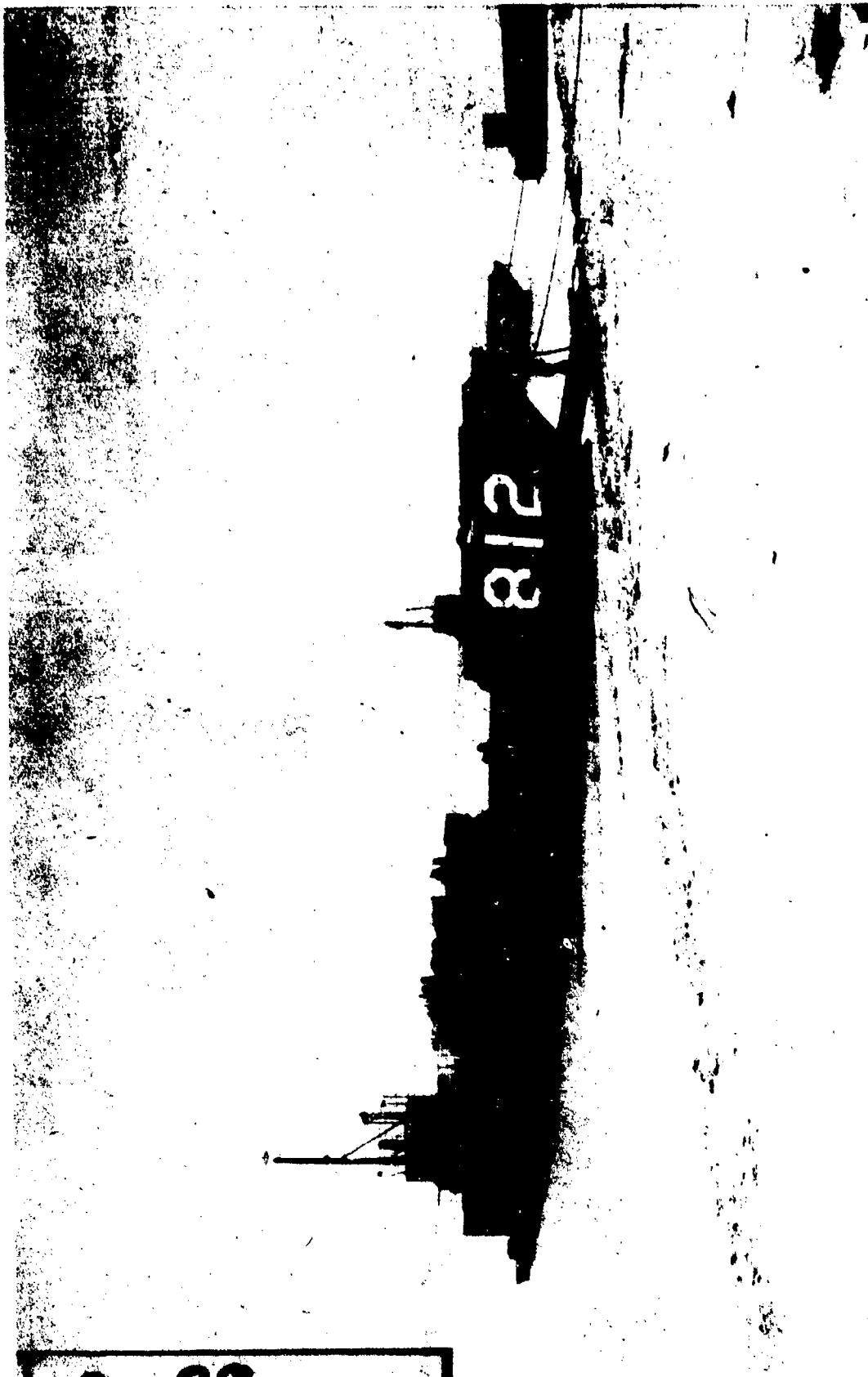
AA-CR-98-1957-1. LCT-414 after Test A.

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AA-CR-98-1958-3. LCT-812 after Test A.

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AA-CR-98-1958-4. LCT-1175 and LCM-4 after Test A.

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AA-CR-98-1956-4. LCT-1237 after Test A.

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AA-CR-199-2822-1. LCM-2 after Test A.

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AA-CR-199-2820-8. LCM-3 after Test A.

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AA-CR-199-2819-8. LCM-4 after Test A.

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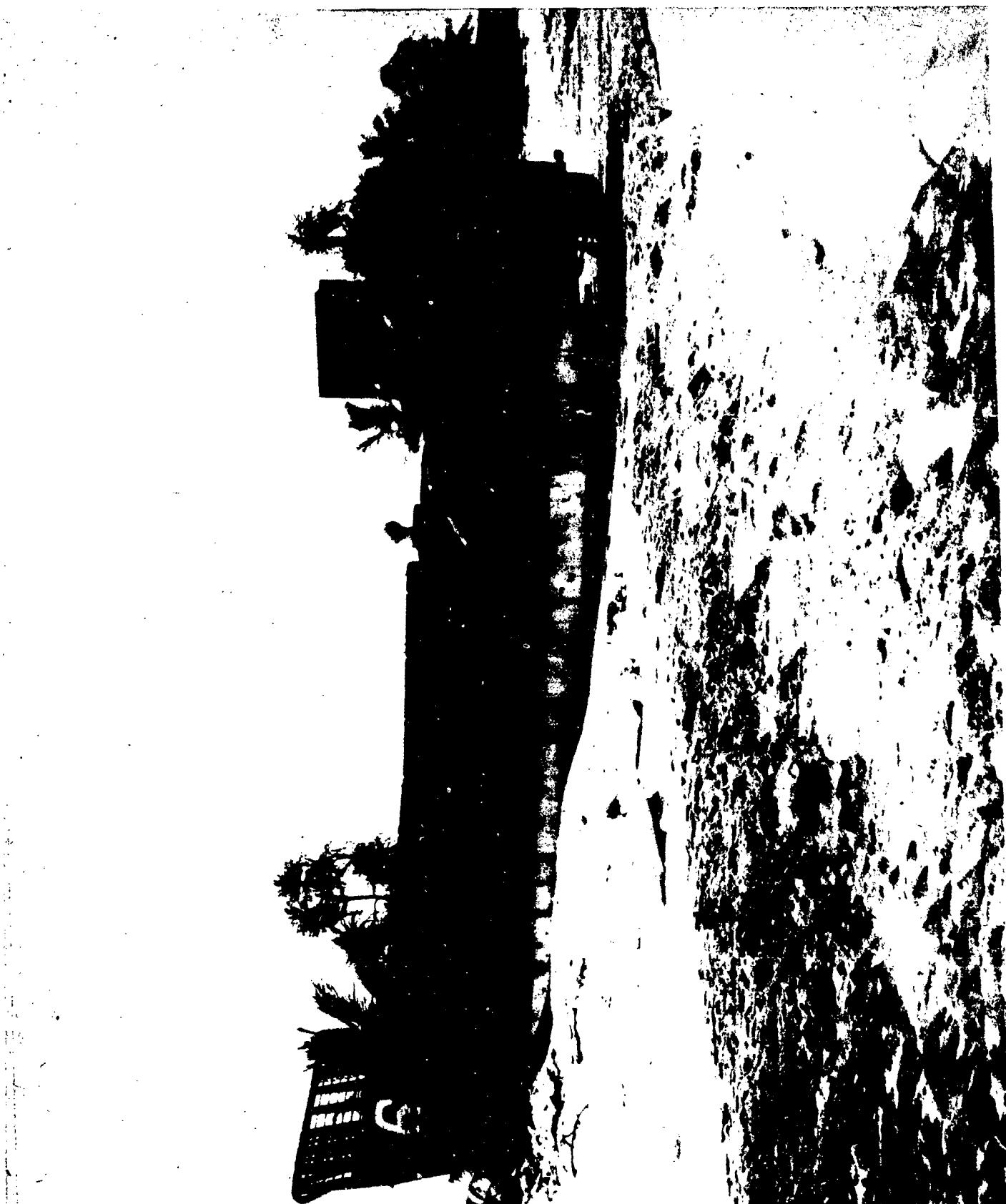
AA-CR-199-2818-2. LCM-5 after Test A.

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AA-CR-98-1957-11. LCM-6 after Test A.

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AA-CR-199-2822-5. LCVP-7 after Test A.

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AA-CR-199-2821-5. LCVP-8 after Test A.

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AA-CR-199-2820-1. LCVP-9 after Test A.

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AA -CR-199-2819-5. LCVP-10 after Test A.

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AA-CR-199-2819-1. LCVP-10 after Test A.

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AA-CR-98-1957-12. LCVP-11 after Test A.

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AA-CR-199-2846-8. LCVP-12 after Test A.

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Defense Special Weapons Agency
6801 Telegraph Road
Alexandria, Virginia 22310-3398

TRC

18 April 1997

MEMORANDUM FOR DEFENSE TECHNICAL INFORMATION CENTER
ATTENTION: OMI/Mr. William Bush (Security)

SUBJECT: Declassification of Reports

The Defense Special Weapons Agency has declassified the following reports:

/ ✓ AD-366588 4	XRD-203-Section 12 ✓
X — AD-366589 4	XRD-200-Section 9 ✓
AD-366590 4	XRD-204-Section 13 ✓
AD-366591 4	XRD-183 ✓
✓ ✓ AD-366586 4	XRD-201-Section 10 ✓
✓ ✓ AD-367487 4	XRD-131-Volume 2 ✓
✓ ✓ AD-367516 4	XRD- 4 143 ✓
✓ ✓ AD-367493 4	XRD-142 ✓
AD-801410L ✓	XRD-138 ✓
AD-376831L ✓	XRD-83 ✓
AD-366759 4	XRD-80 ✓
✓ ✓ AD-376830L 4	XRD-79 ✓
✓ ✓ AD-376828L 4	XRD-76 ✓
✓ ✓ AD-367464 4	XRD-106 ✓
AD-801404L ✓	XRD-105-Volume 1 ✓
✓ ✓ AD-367459 4	XRD-100 ✓

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✓✓ AD-367517 X	XRD-141 ✓
AD-366762 ✓	XRD-84 ✓
AD-366760 ✓	XRD-81 ✓
AD-366761 ✓	XRD-82 ✓
AD-367501 ✓	XRD-158-Volume 1 ✓
AD-367507L ✓	XRD-152-Volume 4 ✓
✓✓ AD-367495 X	XRD-184 ✓
✓✓ AD-367485 X	XRD-129 ✓
✓✓ AD-367484 X	XRD-128 ✓
✓ AD-367483 X	XRD-127 ✓
✓ AD-367482 X	XRD-126 ✓
AD-367488 ✓	XRD-132
✓ AD-367480 X	XRD-124 ✓
AD-801409L ✓	XRD-135 ✓
✓ AD-367490 X	XRD-136 ✓
✓ AD-367492 X	XRD-137 ✓
AD-801411L ✓	XRD-139 ✓
✓ AD-367518 X	XRD-140 ✓
AD-367515 ✓	XRD-144 ✓
AD-367514 ✓	XRD-145 ✓
✓ AD-367468 X	XRD-110-Volume 2 ✓
AD-367513 ✓	XRD-146 ✓
✓ AD-367497 X	XRD-162 ✓

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AD-801406L ✓ XRD-114!

In addition, all of the cited reports are now **approved for public release; distribution statement "A" now applies.**

Ardith Jarrett
ARDITH JARRETT
Chief, Technical Resource Center